

## THE CLAIMS

1    1-12. (cancelled)

1    13. (previously presented) A zirconium-based alloy suitable for use in a corrosive  
2    environment where it is subjected to increased radiation, the alloy having a quality and impurity  
3    level, including up to 1600 O ppm and up to 120 ppm Si, suitable for use in nuclear reactors, the  
4    alloy consisting essentially of:

5              0.65-1.6 percent by weight Nb;

6              0.3-0.6 percent by weight Fe;

7              0.65-0.85 percent by weight Sn;

8              0.0-0.20 percent by weight Ni;

9              0.0-0.60 percent by weight Cr; and

10             the balance being Zr.

1    14. (previously presented) The zirconium-based alloy according to claim 13, containing up  
2    to 0.2 percent by weight Ni.

1    15. (previously presented) The zirconium-based alloy according to claim 13, containing up  
2    to 0.6 percent by weight Cr.

1    16. (cancelled)

1    17. (previously presented) The zirconium-based alloy according to claim 13, wherein the  
2    alloy comprises a part of a component in a nuclear energy plant.

1    18. (previously presented) The zirconium-based alloy according to claim 17, wherein the  
2    component comprises a part of a fuel assembly.

- 1    19. (previously presented) A component in a nuclear energy plant, comprising:
  - 2                 a zirconium-based alloy according to claim 13.
- 1    20. (previously presented) The component according to claim 19, wherein the component  
2                 comprises a part of a fuel assembly.
- 1    21. (previously presented) The component according to claim 20, wherein the component  
2                 comprises a cladding tube for nuclear fuel.
- 1    22. (previously presented) The component according to claim 21, wherein at least a part of  
2                 an inner circumference of the component comprises a layer of a material that is more ductile than  
3                 the alloy.
- 1    23. (previously presented) The component according to claim 22, wherein the layer  
2                 comprises a zirconium-based alloy having a total content of alloying elements that does not  
3                 exceed 0.5 percent by weight.
- 1    24. (previously presented) The component according to claim 19, wherein the component  
2                 comprises a cladding tube for nuclear fuel.
- 1    25. (previously presented) The component according to claim 24, wherein at least a part of  
2                 an inner circumference of the component comprises a layer of a material that is more ductile than  
3                 the alloy.
- 1    26. (previously presented) The component according to claim 25, wherein the layer  
2                 comprises a zirconium-based alloy having a total content of alloying elements that does not  
3                 exceed 0.5 percent by weight.

1    27. (previously presented) A component for a nuclear energy plant, consisting essentially of  
2    a zirconium-based alloy according to claim 13.

1    28. (previously presented) The component according to claim 27, containing up to 0.2  
2    percent by weight Ni; and/or containing up to 0.6 percent by weight Cr.

1    29. (previously presented) The zirconium-based alloy according to claim 13, including 50-  
2    120 ppm Si.

1    30. (previously presented) The zirconium-based alloy according to claim 13, including 500-  
2    1600 ppm O.

1    31. (previously presented) The zirconium-based alloy according to claim 13, wherein the  
2    amount of O is only at a level that is the normal impurity level that results from the production of  
3    the alloy.

1    32. (previously presented) The zirconium-based alloy according to claim 13, wherein the  
2    amount of Si is only at a level that is the normal impurity level that results from the production  
3    of the alloy.

1    33. (previously presented) The zirconium-based alloy according to claim 13, wherein the  
2    alloy includes no Cr except for possibly a very small amount at the impurity level.

1    34. (currently amended) The zirconium-based alloy according to claim 13, wherein the alloy  
2    includes no Ni except for possibly a very small amount at the impurity level.